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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|----------------------|------------------|
| 09/102,939 | 06/23/1998 | MARTIN BICHSEL | P/1336-101 | 2391 |
| 2352 | 7590 | 12/06/2005 | EXAMINER | |
| OSTROLENK FABER GERB & SOFFEN 1180 AVENUE OF THE AMERICAS NEW YORK, NY 100368403 | | | OPSASNICK, MICHAEL N | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2655 | |

DATE MAILED: 12/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Supplemental

Notice of Allowability

Application No.

09/102,939

Examiner

Michael N. Opsasnick

Applicant(s)

BICHSEL, MARTIN

Art Unit

2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to pre-publication review.
2. ☒ The allowed claim(s) is/are 4-8, 10-16, 33-52 and 61.
3. ☒ The drawings filed on 11 July 2005 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

W. R. YOUNG
PRIMARY EXAMINER

DETAILED ACTION
EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

The application has been amended as follows:

Please replace claim 61 as follows:

61. (Previously Presented): The method of claim 8, wherein for the purpose of the low pass filtering, the convolution is performed according to the relationship:

$$y_j = \sum_{i=0}^{18} a_i x_{j-i}$$

where:

j is the time index, y_j is the output value of the low pass filtering at the time j ;

x_j is the input value for low pass filtering at the time j ;

a_i is the coefficient of the convolution sequence; and

a_0 - a_{18} are [0.03, 0.0, -0.05, 0.0, 0.06, 0.0, -0.11, 0.0, 0.32, 0.50, 0.32, 0.0, -0.11, 0.0, 0.06, 0.0, -0.05, 0.0, 0.03].

Art Unit: 2655

Examiner notes that the only new difference of claim 61 is the added “.” which was missing at the end of claim 61.

Allowable Subject Matter

2. Claims 4-8,10-16,33-52,61 are allowable over the prior art of record.

The recited limitations of independent claims 4,11, and 16, pertaining to the combination of a double normalization process of banded noise signals in the time domain with a non-linear mapping function, is not explicitly taught by the prior art of record.

With respect to the prior art of record, it is old and notoriously well known in the art of audio signal processing to perform ambient noise compression for storage. For example, Rasmusson et al (5835851) teaches a method for compression of an electric audio signal (abstract) wherein noise is subject to a variable attenuator (col. 5 line 63 – col. 6 line 15) and mapping the noise back to an acceptable energy level to match the speech → col. 6 lines 15-25); Kang et al (4630300 teaches switching between a low pass filter and a power ratio computation (Fig. 2); Freifeld et al (4061875) teaches alternating between a compressor and an expander (Fig. 2); Williamson et al (5027410) teaches a multistep gain function (col. 11 line 45 – col. 12 line 50) for noise suppression..

However, none of the prior art of record explicitly teaches the combination of a double normalization process of banded noise signals in the time domain with a non-linear mapping function, as recited in independent claims 4,11, and 16, as noted above.

Art Unit: 2655

Furthermore, it would not have been obvious to one of ordinary skill in the art of audio compression at the time the invention was made to modify the teachings of the prior art of record to obtain the recited claim limitations of independent claims 4, 11, and 16, as noted above.

Dependent claims 5-8, 11-15, 33-52, 61 are allowable over the prior art of record because these claims depend from claims that have been determined to be allowable over the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Opsasnick, telephone number (571)272-7623, who is available Tuesday-Thursday, 9am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Wayne Young, can be reached at (571)272-7582. The facsimile phone number for this group is (571)272-7629.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group 2600 receptionist whose telephone number is (571) 272-2600, the 2600 Customer Service telephone number is (571)272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mno
11/21/05/05



W. R. YOUNG
PRIMARY EXAMINER